

J. NOISE

EXISTING CONDITIONS

In assessing community noise impacts, the number of people impacted and the level of noise impacting them must be considered. In general, while lower noise levels cover a larger area and usually affect more people, they are less annoying than higher noise levels. For the purposes of this report, noise levels are measured in decibels using day-night average sound levels or DNLs. This is a cumulative noise metric which describes the noise occurring during a 24-hour period as averaged over one year.

In the 60-65 DNL range, it is assumed that 20.5 percent of the affected population are annoyed by noise. In the 65-70 DNL range, 37.6 percent are annoyed; in the 70-75 DNL range, 64.4 percent are annoyed; and above 75 DNL, 100 percent are annoyed (Coffman Associates 1994).

Established guidelines show that residential development other than mobile homes and transient lodging are incompatible with noise above 65 DNL. Schools and other public use facilities are generally incompatible with noise between 65 and 75 DNL. Many uses are considered compatible in areas subject to noise between 65 and 75 DNL if noise level reduction can be achieved through sound insulation. These include: hospitals, nursing homes, churches, auditoriums and concert halls.

There are many sources of noise in a community. Some noise is indigenous to the community such as traffic on local streets, landscaping machinery, snow blowers, air conditioning compressors, and outdoor residential activity. Indigenous noise increases or decreases as a function of population

density. The process of determining indigenous noise levels requires the determination of population densities in the smallest geographical areas with reliable statistical data. In general, it would take 15,800 persons per square mile to generate 60 DNL from indigenous sources (Coffman Associates 1994). No residential areas within the Study Area have population densities sufficient to generate a 60 DNL noise contour.

Other sources of noise include: road traffic, railroad activities, commercial and industrial activities, and airport activities. Road traffic noise accounts for noise levels exceeding 60 DNL in the Study Area, primarily along Central Avenue from State Route 155 to the Schenectady County line. Using the four types of data including traffic volume, traffic speed, time of day, and vehicle mix, a traffic model is generated.

Based on this model, roadway noise in the Central Avenue area ranges from 60 DNL at 671 feet from the center of the roadway, to 75 DNL at 65 feet from the center of the roadway.

A section of the Conrail track lies between Central Avenue and the New York State Thruway, I-90. This track handles mostly passenger traffic with some local freight operations. Data on train movements in the Study Area indicates that a 60 DNL contour would reach 250 feet either side of the railroad right of way. Higher level contours remain very close to the line.

Commercial and industrial areas vary greatly in their noise levels, depending on the specific type of activity occurring there. In general, manufacturing districts may experience noise levels ranging from 60 to 75 DNL,

warehousing areas from 60 to 70 DNL, and commercial centers from 60-70 DNL. Much of the noise relates to the volume of traffic into and out of the area, although industrial process noise may contribute to the general outdoor noise level.

Within the Study Area, the commercial strip along Central Avenue is considered a primary noise source. Other smaller pockets of business zones exist within the Study Area along sections of Consaul Road and New Karner Road. Allowable commercial activities along the Route 5 corridor (zoned Business E) include: farms, nurseries, schools, fire stations, non-commercial golf courses, public buildings, retail stores, offices, banks, theaters, wholesale businesses, motels/hotels, and research and development laboratories.

Industrial activities occur along Kings and Curry Roads, as well as sections of New Karner Road and Albany Street. According to Chapter 190 Town of Colonie Zoning Code, Article III, uses in these areas include any use permitted in a Business E, E-1, E-2, G, Undeveloped or Commercial H district. Manufacturing of products in these areas shall be deemed to be objectionable if the noise generated as a result can be clearly heard or the vibration can be distinctly felt.

Albany County Airport

Of all noise sources, those related to activities at the nearby Albany County Airport may have the most profound impact on the Study Area. Airport noise is a direct function of a number of factors: the types of aircraft using the airport; the time of day; runway use: flight tracks; and engine maintenance run-ups.

In addition, local regulations require departing aircraft to fly in the direction of the runway until reaching 2,000 feet before turning. This

has the affect of producing noise contours along extended runway centerlines. The effect of flight track turns is therefore hidden since the turns occur at some distance from the airport.

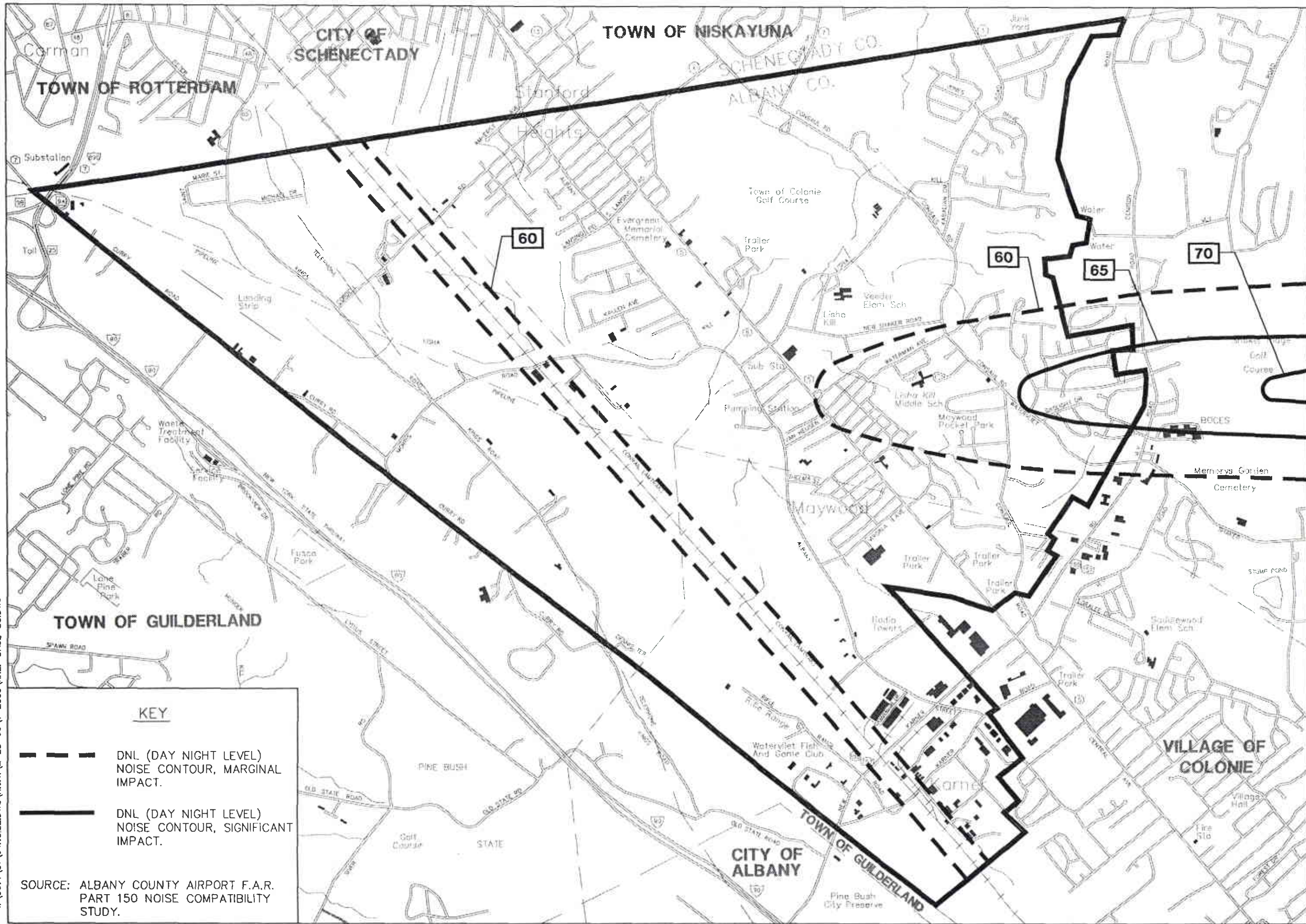
As is shown in Figure II-J-1, within the Study Area the 65 DNL noise contour has the most significant impact, affecting a small residential development located between Denison Road and Watervliet Shaker Road. Within this area, noise complaints have been received relative to overflight noise. The 60 DNL noise contour has a more marginal impact, with a slightly wider area than the 65 DNL contour, covering a sizable single-family residential development from Denison Road to Central Avenue. No noise complaints have been received from residents in this area.

IMPACTS AND MITIGATION MEASURES

Since indigenous noise is a function of population density, one way to control such noise would be to reduce the allowable residential and commercial development densities in all or a portion of the Study Area. This could be accomplished through revisions to local zoning laws, which would reduce the density of development in any particular zone and/or change allowable uses in specified areas to exclude more intensive development in certain portions of the Study Area.

There are several techniques available to reduce traffic and related noise in the study area along Central Avenue including, ride-sharing, variable work hours, and transit programs. Ride-sharing techniques to reduce peak traffic congestion are focused upon the sharing of rides to work through the use of car pools, van pools, and subscription buses. Organizational efforts for ride-sharing programs vary, from co-worker agreements to

I:\5371\01\9\NOISE.DWG\R.J.T.\2-23-96\1=2000\XREF BASE-SC.DWG



KEY

--- DNL (DAY NIGHT LEVEL) NOISE CONTOUR, MARGINAL IMPACT.

— DNL (DAY NIGHT LEVEL) NOISE CONTOUR, SIGNIFICANT IMPACT.

SOURCE: ALBANY COUNTY AIRPORT F.A.R. PART 150 NOISE COMPATIBILITY STUDY.

1994 NOISE EXPOSURE

**LISHA KILL - KINGS ROAD AREA
GENERIC ENVIRONMENTAL IMPACT STATEMENT**



CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS
& LANDSCAPE ARCHITECTS
© 1994
III WINNERS CIRCLE, ALBANY, NEW YORK -12205

SCALE: 1" = 2000'

FIGURE NO. II-J-1

employer-oriented programs, although the best results have been achieved in situations where employers have initiated programs. If implemented aggressively, ride-sharing can result in a 10 percent-15 percent shift from driver-only automobiles to the various forms of ride-sharing.

Reduction of truck traffic on Cordell Road, Morris Road, and Albany Street as a result of developing a new connector road would also reduce the noise impact along these roads, especially when residential areas are bypassed. Variable work hour techniques redistribute the times during which trips to and from employment are made. This strategy reduces peak traffic congestion and related noise by eliminating sharp peaks in traffic demand. The application of such programs is largely tied to the flexibility of the employer and the overall operation of the company.

The use of mass transit for the commuting trip is a very effective means of reducing the number of driver-only automobiles and related noise. In order for transit programs to be successful however, it is critical that the transit routes serve the actual travel desires of the employees, as well as offer convenient travel times and adequate frequency of service. The better the transit service provided, the more transit riders can be expected, thereby having a greater impact on traffic noise reduction.

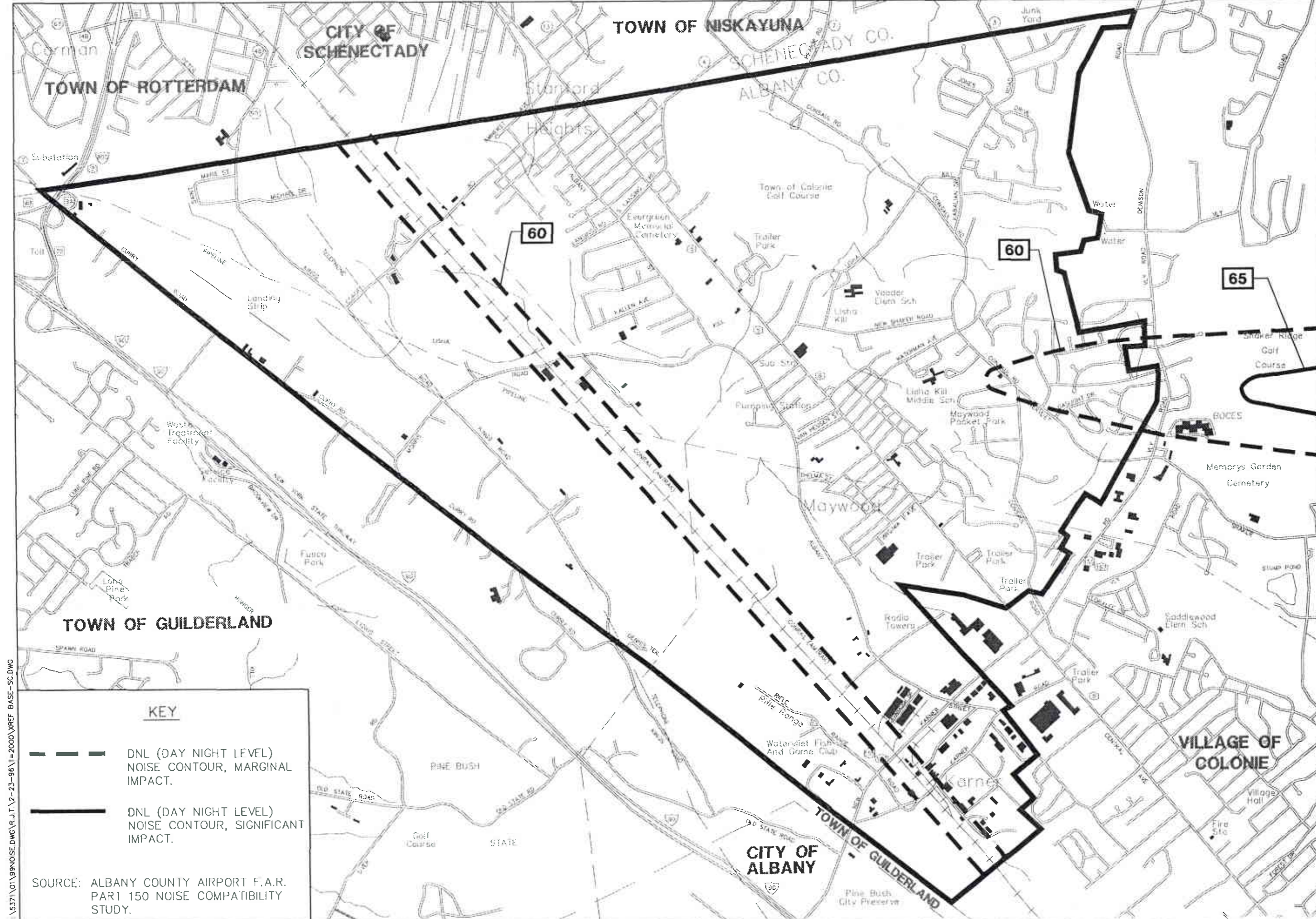
The effects of train generated noise on the general population can be controlled through appropriate land use and zoning regulations in areas adjacent to the Conrail track. Specifically, these areas are not appropriate for residential zoning, but are compatible with commercial and industrial uses. In the Study Area, the railroad track passes through

Industrial F zoning entirely. However, at its northern most end, a section of track lies close to a small residential district A-3. Certain types of noise buffers and screening may be appropriate to reduce rail noise levels in adjacent residential neighborhoods.

Land-use and zoning regulations are effective in controlling noise generated by commercial and industrial activities by limiting the types of acceptable uses in designated areas. Appropriate zoning can reduce exposure of annoying levels of noise to residential areas. Other regulatory measures may be explored such as limiting hours of operation, types and routes of truck traffic, and establishing maximum (outdoor) noise thresholds for specific types of industrial processes.

Albany County Airport

In 1999, it is projected that the overall shape of the aircraft noise exposure contours will be generally similar to that of 1994. However, in the Study Area, the area encompassed by the 60 DNL contour set is significantly smaller, even though airport operations are forecast to increase (Figure II-J-2). This is due to the steady conversion to quieter "Stage 3" aircraft as is required by the FAA (currently, the air carrier operating fleet at Albany County Airport is approximately 43 percent Stage 3 jets). Figure II-J-2 presents the anticipated 1999 contours. It is predicted that the 60 DNL contour would reach only to Watervliet Shaker Road. In addition, the 65 DNL contour would no longer affect the Study Area at all. Beyond the year 2,000, the contour sets are reduced further still and are outside the Study Area. Therefore, the future noise impact of the Albany County Airport in the Study Area would likely be minimal.



I:\5371\01\199NOISE.DWG (R.U.T. 2-23-96) 1=2000 \XREF BASE-SC.DWG

KEY

- DNL (DAY NIGHT LEVEL) NOISE CONTOUR, MARGINAL IMPACT.
- DNL (DAY NIGHT LEVEL) NOISE CONTOUR, SIGNIFICANT IMPACT.

SOURCE: ALBANY COUNTY AIRPORT F.A.R. PART 150 NOISE COMPATIBILITY STUDY.

1999 NOISE EXPOSURE
LISHA KILL - KINGS ROAD AREA
GENERIC ENVIRONMENTAL IMPACT STATEMENT



CHA CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
111 WINNERS CIRCLE - ALBANY, NEW YORK - 12205
SCALE: 1" = 2000'
FIGURE NO. II-J-2